

TIMELINEZ

21

SAN FRANCISCO / BAY AREA

TIMEX / SINCLAIR USERS

VOLUME 1 ISSUE 5

NOVEMBER

\$1.00

2000 UPDATE

TIMEX HAS CONTINUED TO CONDUCT A SILENT PROMOTION FOR ITS REWORKED 2000 SERIES COMPUTER. A FEW MAGAZINES HAVE TALKED ABOUT THE NEW 48K COLOR COMPUTER BUT TIMEX HAS BEEN CAREFUL TO NOT GET CAUGHT IN THE BIND THAT COLECO AND OSBORNE HAVE, TO NAME A FEW OF THE MANY COMPANIES TO SUFFER FOR PROMOTING HARDWARE THAT ISN'T READY. MANY PEOPLE HAVE HAD A FIRST HAND EXPERIENCE WITH THE NEW TIMEX 2068 AND HAVE GIVEN FAVORABLE IMPRESSIONS. TO HELP FURTHER IMPRESS AND TO GIVE THE CONSUMER ADDITIONAL REASONS TO BUY THE NEW COMPUTER, TIMEX HAS PROVIDED EXAMPLES OF EQUIVALENT PROGRAMS DESIGNED TO ILLUSTRATE PROGRAMMING EASE ON THE 2068 VERSUS THE COMMODORE 64. YOU SHOULD NOTICE THAT MOST OF THE EXAMPLES INDICATE THAT THE 2068 IS A SUPERIOR GRAPHICS MACHINE. WE WILL HAVE TO WAIT FOR MORE IN DEPTH COMPARISONS ONCE THE 2068 IS ON THE MARKET IN LATE OCTOBER.

COMMODORE 64 SEMICIRCLE

```
5 BASE=2*4096:POKE53272,PEEK(53272):ORB:REM PUT BIT MAP AT 8192
10 POKE53265,PEEK(53265):OR32:REM ENTER BIT MAP MODE
20 FORI=BASETOBASE+7999:POKEI,0:NEXT:REM CLEAR BIT MAP
30 FORI=1024TO2023:POKEI,3:NEXT:REM SET COLOR TO CYAN AND BLACK
50 FORX=0TO160:REM DO HALF THE SCREEN
55 Y1=100+SQR(160*X-X*X)
60 FORY=Y1TOY2STEPLY1-Y2
70 CH=INT(X/8)
80 RO=INT(Y/8)
90 BY=BASE+RO*320+8*CH+LN
100 BI=7-(XAND7)
110 POKEBY,PEEK(BY)OR(2IBI)
114 NEXT
120 NEXTX
125 POKE1024,16
130 GOTOL30
```

LOOK INSIDE FOR ADDITIONAL PROGRAMMING EXAMPLES. WE WOULD BE PLEASED TO PUBLISH OTHER EXAMPLES OF HOW THE TIMEX AND A COMPETITOR WORK TO DO THE SAME PROGRAM.

TS2000 SEMICIRCLE

```
7 BORDER 1: PAPER 5: CLS
10 PLOT 0,88: DRAW 128,0,PI
```

COMMODORE 64 HAND CLAP

```
10 S=54272
20 FORL=TO24:POKES+L,0:NEXT
30 POKES+0,240:POKES+1,33
40 POKES+5,8
50 POKES+22,104
60 POKES+23,1
70 POKES+24,79
80 FORN=1TO15
90 POKES+4,129
100 FORT=1TO250:NEXT:POKES+4,128
110 FORT=1TO30:NEXT:NEXT
120 POKES+24,0
```

-CONTINUED ON PAGE 28-

ATTENTION BAY AREA USER GROUP MEMBERS

THE PENINSULA GROUP WILL HOST OUR THIRD JOINT GET-TOGETHER ON SUNDAY OCT. 16. ALL USER GROUP MEMBERS ARE INVITED.

FESTIVITIES WILL START AT 12:00 WITH A JOINT BUSINESS MEETING AT 2:00. WE HAVE SOME SURPRISES PLANNED SO COME AND MEET YOUR T/S NEIGHBORS. SEE YOU THERE.

A LOW COST DISK DRIVE FOR THE Timex/Sinclair

Sinclair Radionics, Ltd. of London, England, now has available a low cost disk drive for its line of personal computers. Named the Sinclair ZX Microdrive, it uses an under 3-inch diameter disk with a storage capacity of 85-kbytes. The system uses a single spiral track recording system similar to that of a phonograph. Control is provided through a Ferranti, Ltd. custom designed LSI chip.

The drive will load a 48-kbyte program in 3.5 seconds and the worst case access time for a file is also 3.5 seconds. Up to 50 files can be stored on any single microdrive. A microdrive disk is removable and contained in a square housing about 3 inches on a side. The drive is only slightly larger than the disk and about 3 inches high. A total of 8 drives can be interfaced to the Sinclair/Timex computer, for a total storage capacity on-line of 680-kbytes.

The microdrive will be interfaced to the Sinclair/Timex computers by another new Sinclair product, the ZX Interface 1. The drive will fit under the new Spectrum/TS-2000 series computers. The unit provides a modified Sinclair/Timex basic operating system for the microdrive files. The new unit also provides for the handling of a host of new communications abilities.

The new interface unit allows for local area networking at a 100-kbaud transfer rate. This permits the linking of 64 Spectrum/Timex systems at once. A full video screen transfer can occur in 3 seconds, and the LAN protocol allows any Spectrum/TS-2000 to source any single, or group of target Spectrum/TS 200 systems.

In this manner selected Spectrum/TS 200 systems may serve as a dedicated file server with as many as 8 microdrives or as a printing station. To expand the capabilities of the present dedicated Sinclair/Timex

thermal printer, the expansion interface unit features an RS-232 port for serial communications or printing functions.

The price of the microdrive unit in the United Kingdom is \$76 (U.S. currency). Industry sources indicate that the model TS-2000, a ZX 1 Interface and a ZX Microdrive may retail in the United States for under \$300.

SOLAR WATER HEATER PAYOFF BY HOWARD COLLINS

```

10 LET P=4000 (Price of
installation)
20 LET I=.09 (Interest on bank
savings)
30 LET E=.70 (Efficiency, % of solar
heated water, 70% in this case.)
40 LET Y=5 (Years being consider-
ed.)
50 LET F=14 (Fuel cost, use summer
gas bill figures.) (monthly)
60 LET G=.17 (Annual gain in the
price of gas. This is a big variable.
PG&E says 7-15%. California Public
Utilities Commission says 21% for next
three years, tapering down to 15% over
the next ten years. Solar heater
salesmen will use 35% to 50% in their
sales pitch.)
70 LET T=0 (Total gas bill, zero
initially.)
80 LET N=0 (Number used for year.)
90 LET T=T+(F*12*(1+G)**N) (Total gas
bill for year being checked out.)
(Adds to previous total.)
100 IF N=Y THEN GOTO 130
110 LET N=N+1
120 GO TO 90
(110 and 120 develops total gas bill
years being investigated.)
130 PRINT T; "- Total gas cost
40 LET W= (P*.5* (1+I)**(4-.5))-
(T*(1-E) (Line 140 premises you
will get back 50% of the price from
federal state tax credits and put it
in the bank to draw interest a half
year later. The (T*(1-E)) is the
cost of the 30% water being heated by
gas.)
150 PRINT W; 'Money in bank with
solar.
160 LET O=(P*(1-I)**Y)-T (Money
stays in bank without solar.)
170 PRINT O; 'Money in bank without
solar.' (With above inputs,
T=$1546.75, W=$2483.44, O=$4607.75

```

LEARNING Z80
ASSEMBLY LANGUAGE
PROGRAMMING
PART 3

In previous articles we discussed the registers, hex numbers, and wrote a routine to print a message to the screen. In this article we will take a look at a few principles involved with writing loops and accessing tables.

Load the basic program from article two of this series, (Vol 1 Iss. 2), write to 4082h. Enter the hex codes in the left columns.

21 CA 40 START LD HL, TABLE

First we want to load the variable PNTR (pointer), with the address of TABLE. PNTR will always hold the current address in TABLE of the byte we want to access. The most convenient way of loading a memory location with a value is to load a 16-bit register pair with this value,

22 C8 40 LD (PNTR), HL

then loading the 16-bit address with the value in the register pair. We need to do this because there is no single instruction to load a memory location directly with data.

2A C8 40 NXTPT LD HL, (PNTR)

This is the beginning a routine to access a single byte of 8-bit data from a table. PNTR is a program variable that we will use to keep track of the address of the next byte to access.

7E LD A, (HL)

Load the accumulator with the contents of the address pointed to by the HL register pair.

23 INC HL

Increment PNTR to the next address in the table

22 C8 40 LD (PNTR), HL

The last two instructions updated PNTR, and stored the value back in PNTR. It is very important to make sure all pointers, registers are updated, before continuing operations in general.

FE FF CP FF

We will place the byte FF at the end of our table. This will provide us a means of stopping execution of the program. In this format we can have a table of any length and not have to change the code. We only have to remember to place FF at the end.

C8 RET Z

The way out, if the contents of the accumulator and the contents of address pointed to by HL are the same the zero flag is set (1) and we will return to basic. Of course we could CALL this routine from another program and this instruction will return us to our program instead of BASIC.

FE 18 CP 18

The next test we will perform will be to see if the contents of A is larger than 18h, which is the last line on the screen.

D2 8B 40 JP NC, NXTPT

If the byte from the table is less than 18h then the CARRY flag is set (1) and the program continues. Likewise, if the byte from the table is larger than 18h, the CARRY flag will be reset (0). We will then jump to location NXTPT and get the next byte from the table.

47 LD B, A

The byte we got from TABLE will be used as a counter for a loop that will enable us to get the starting address in the display file.

2A 0C 40 LD HL, (400C)

This begins the initialization section of the next loop.

23 INC HL

12 21 00 LD DE, 0021

21h is the length of one line in the display file.

19 ADLP ADD HL, DE

This is the processing portion of the addition loop. To get the address for

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Timex Sinclair still in game

By Kevin Anderson
USA TODAY

Six months ago, analysts were wondering if Timex Inc. — with no apparent encore to its history-making Timex Sinclair 1000 home computer — would stay in the home computer business.

Last week, Timex began shipping the \$199 Timex Sinclair 2068 — touted as a second-generation home computer able to compete with the Commodore 64, Apple II and Coleco Adam.

Next week, it begins a national advertising blitz to let the USA know that the company that introduced the under-\$100 computer isn't out of the home computer game — crazy as that game has gotten.

The Timex Sinclair 1000 was credited with turning computers into mass-market items last year. But it and its early competitors, although inexpensive, did little useful computing.

Consumers quickly grew bored with them, price wars ensued as sales lagged, and makers scrambled to launch a second generation of home computers more like the powerful personal business computers costing \$1,000 and more.

In June, Coleco Inc.'s Adam and Atari Inc.'s 600XL were announced with much hoopla. Few noticed Timex's announcement that it would upgrade its Timex Sinclair 2000, which never was shipped.

"The 1000 was never more than a simple literacy computer. This is the next step, and we think a lot of our customers will move up to it," Daniel D. Ross, Timex vice president of computer marketing, said Monday. That bodes well, con-

the program we add hl,de times the number we got from TABLE.

```
10 FD          DJNZ  ADLP
```

Do it until register B = 0

```
06 20          INITL LD      B,20
```

Now we will begin to draw the line at the address produced from the previous loop. B now equals the number of characters to draw.

```
23            INLP   INC     HL
```

```
36 80          LD     (HL),80
```

We are at the processing section of the drawing loop. Here we are loading the 8-bit location, addressed by the register pair HL, with the data 80h, which is the TIMEX character code for an inverse space. We could change this to any character we wished.

```
CD BC 40      CALL   TLOOP
```

CALL if you remember is like GOSUB in basic. That is, we will goto TLOOP and then return to the next instruction. We need to have a timing loop here so we can see what happens on the screen. You could change the value in TLOOP later on and see what happens.

```
10 FB          DJNZ   INLP
```

This instruction decrements register B, that we previously loaded, then tests the zero flag. If zero = 0 (not zero) then we go back to INLP. If zero = 1 then we continue to the following instruction. DJNZ is what is called a jump relative instruction. Jump relative instructions do not jump to an absolute address, they jump a set amount of STEPS forward or backward. Toni Baker's book Mastering Machine Code on Your ZX81 has an excellent description and a table of relative jumps. The subject is a lengthy one and we do not have the space here to do it justice.

```
06 20          SECLP LD      B,20
```

```
36 00          SLOP LD      (HL),0
```

```
2B            DEC     HL
```

```
CD BC 40      CALL   TLOOP
```

```
10 FB          DJNZ   SLOP
```

```
36 00          LD     (HL),0
```

```
JP           NXTPT
```

This is the reverse of the first loop, undrawing the line that we wrote in the first.

```
C5            TLOOP PUSH   BC
```

```
01 00 01      LD      BC,0150
```

```
08            TLOP   DEC     BC
```

```
78            LD      A,B
```

```
B1            OR      C
```

```
C2 C0 40      JP      NZ,TLOP
```

```
C1            POP     BC
```

```
C9            RET
```

This is a 16-bit timing loop. That is it can handle timings of up to 65536 decimal. If BC equals 0000 when entering it will start at FFFFh because the first instruction of TLOP decrements Bc.

```
00 00          PNTR
```

This is the location of PNTR. It is merely a memory location we will use to store the table pointer. We must reserve two bytes of space here for it, so enter two bytes of zero's here.

```
00 00 00 00 00 00 00 00  TABLE
```

Here enter any amount of zeros to accomodate the length of the table you wish to create. You may load the table later by writing to address 40CA.

BE SURE TO PLACE AN FFh AFTER YOUR TABLE !!!

This program can be used as a subroutine in a game. One way would be to add another test (CP) for your character, a particular object etc.

You could also have your program write the table and then entering with CALL.

sidering that analysts say Timex accounts for 21.6 percent of the 8.5 million home computers in place, and 28 percent of those sold so far this year.

Timex also has the advantage of a current gap in deliveries. Adam and Atari are late coming to market. "There are some open spots on the shelves, and if Timex is shipping, they may get them by default," said Egli Jullison, chairman of Future Computing Inc.

The Timex Sinclair 2068 will sell for \$199 at Sears and Best department stores. It has 64,000 bytes, or characters, of main memory. Timex has eschewed packaging the computer with a printer and program drive, as Coleco and Atari are doing. But even with those accessories added, the purchase price still is slightly less than Coleco's \$600 Adam.

LAST MINUTE NOTICE

TIMELINEZ has just learned about a conference that Timex will be sponsoring in Boston on Oct. 22. We are not sure about all the details yet, but it seems that User Group members and second party H/W and S/W suppliers are invited.

Rita Carr from the South Bay group will be on vacation near Boston at this time and she has volunteered to attend this meeting on behalf of all the groups. If anyone wants to have an item shown to Timex, they can send it to Rita and she will represent it at the meeting.

In order to make arrangements to get things to Rita, please contact Paul Perreault or George Mockridge. We hope to have more info. about this event in the near future.

PUG NEWS

I HOPE THAT THIS ISSUE OF TIMELINEZ WILL REACH ALL OUR SUBSCRIBERS BEFORE OCT. 16TH. ON THAT DATE, PUG WILL HOST A JOINT MEETING FOR ALL T/S USER GROUP MEMBERS IN THE BAY AREA. THIS WILL BE AN OPPORTUNITY FOR PEOPLE TO MEET AND TALK WITH OTHERS WHO SHARE COMMON INTERESTS ASSOCIATED WITH TIMEX COMPUTERS.

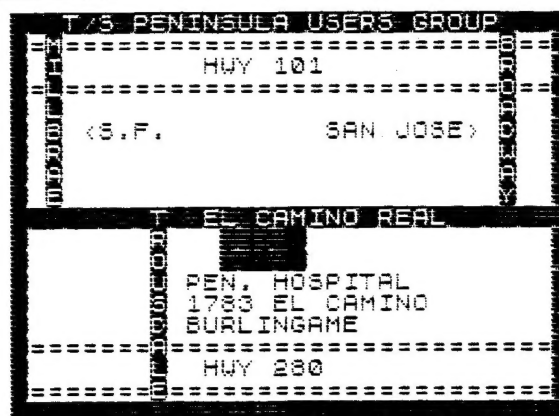
WE PLAN TO HAVE DISCUSSIONS ON BASIC, ASSEMBLY AND FORTH LANGUAGE PROGRAMMING. THERE WILL ALSO BE A CHANCE TO VIEW A WIDE VARIETY OF PERIPHERAL HARDWARE PRODUCTS. THE S/W LIBRARY WILL BE IN OPERATION WITH OVER 75 PROGRAMS AND WE HAVE A NUMBER OF DOOR PRIZES TO GIVE AWAY.

BE SURE AND LET ME KNOW IF YOU WANT TO ARRANGE FOR A SPECIAL DISPLAY OR IF YOU WISH TO MAKE A PRESENTATION AT THIS EVENT. I WOULD ALSO ASK OUR REGULAR PUG MEMBERS TO TRY AND PARK A LITTLE FARTHER OUT AND LEAVE THE CLOSER SPACES TO THOSE WHO ARE NOT AS FAMILIAR WITH THE LOTS. THE SIDE ENTRANCE ON THE NORTH END OF THE BUILDING IS THE EASIEST ACCESS TO THE MEETING ROOMS ON THE LOWER FLOOR.

THANKS TO KENDRICK SMITH AND HIS DIRECTORY PROGRAM, I NOW HAVE ALL OUR NAMES AND ADDRESSES ON MY COMPUTER. I PLAN TO LIST THIS INFORMATION IN THE NEXT ISSUE OF TIMELINEZ SO THAT PUG MEMBERS CAN GET IN TOUCH WITH EACH OTHER BETWEEN MEETINGS. IF ANYBODY DOES NOT WISH THIS INFORMATION TO BE PRINTED, LET ME KNOW SO I CAN OMIT YOUR NAME.

FINALLY, I WOULD LIKE TO WELCOME OUR NEWEST PUG MEMBER, LITTLE LYLA RENEE MOURA. LYLA IS THE NEW BABY BORN ON SEPT. 8TH TO PARIS AND FRANK MOURA WHO ARE AMONG THE ORIGINAL MEMBERS OF OUR GROUP. I KNOW I SPEAK FOR EVERYONE WHEN I EXTEND OUR BEST WISHES TO THE MOURA FAMILY. ONE CAN ONLY SPECULATE AS TO THE LEVEL OF COMPUTER TECHNOLOGY THAT WILL BE ACHIEVED IN LYLA'S LIFETIME.

George



MEETINGS ARE HELD ON THE 3RD SUNDAY OF EACH MONTH, 1 P.M.

JOINT MEET. OCT 16
NOV. 20

MEET. ROOMS ARE ON LOWER FLOOR.

NOTE PLEASE USE THE ENTRANCE ON THE NORTH SIDE OF THE HOSPITAL. ALSO TRY TO PARK ON NORTH SIDE, NOT IN THE VISITORS LOT. THANKS.

ELECTRICAL OUTLETS AND TABLES ARE AVAILABLE SO BRING YOUR EQUIP. AND EXTENSION CORDS IF POSSIBLE.

CAFETERIA SERVICE IS AVAILABLE AND FAMILIES ARE WELCOME.

MEMBERSHIP SCHEDULE:

FULL (NEWSLETTER AND S/W LIBRARY PRIVILEGES) \$15/YR

PARTIAL (NEWSLETTER ONLY) \$10/YR

FOR MORE INFORMATION CONTACT:

GEORGE MOCKRIDGE
263 GATEWAY NO. 107
PACIFICA, CA. 94044
(415) 359-3198

SEND NEWSLETTER CONTRIBUTIONS:

FRANK MOURA
858 CHENERY ST.
SAN FRANCISCO, CA. 94131
(415) 333-2231

TIMEX		sinclair	
ZX 81		T/S 1000	
T/S 1500	SPECTRUM	T/S 2000	
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TELL TIMEX CONTEST PART 2

THE REST OF THE ENTRIES IN OUR RECENT TELL TIMEX CONTEST ARE LISTED BELOW. ALL WINNERS CAN SEND TIMELINEZ THEIR 3/4 TITLE SELECTIONS OR THEY CAN PICK UP THEIR 4 FREE TAPES IN PERSON AT SUNSET ELECTRONICS IN SAN FRANCISCO. CONGRATULATIONS TO ALL WHO ENTERED.

DEAR TIMEX:

I/M A SAN JOSE STATE STUDENT AND THE NEW OWNER OF A TS 1000. I/M STILL SAVING MY MONEY TO BUY A 16K OR 32K RAM SO I CAN USE THE TIMEX SOFTWARE. TO DATE I DON'T HAVE ANY SOFTWARE, BUT SOME THAT WOULD HELP ME IN MY MAJOR OF BUSINESS MANAGEMENT AND ON MY JOB ARE AS FOLLOWS:

- 1) QUANTITATIVE BUSINESS ANALYSIS
- 2) ACCOUNTING-ALL LEVELS
- 3) PURCHASING AND MATERIALS INVENTORY CONTROL
- 4) MICRO ECONOMICS W/GRAPHICS
- 5) BUSINESS LAW
- 6) BUSINESS STATISTICS
- 7) MARKETING PROBLEMS
- 8) BUSINESS FINANCE

HOPE THESE HELP.

THANK YOU,
SCOTT OLDENDORPH

DEAR TIMEX,

ENCLOSED PERHAPS, A SUGGESTIVE ITEM THAT TIMEX CAN PRODUCE OR INCORPORATE IN THEIR PRESENT ASSEMBLY OR WHATEVER.

THIS IS AN OVERLAY OF THE KEYBOARD (PHOTO COPY) WITH A PROTECTIVE CLEAR PLASTIC FOR LONGER, DURABLE WEAR. THE BACK SIDE IS OUTLINED WITH 1/16" RUBBER STRIPS WITH "DOUBLE BACK" STICKY TAPE. THIS WILL COVER AND LOOK LIKE THE ORIGINAL EXCEPT FOR THE PINK COLOR FOR ENHANCEMENT. IN USE, I HAVE FOUND THIS TO BE THE MOST EFFECTIVE OVERLAY TO BE FOUND ON THE MARKET, EVEN THE ONE FROM KOPAK. TRY THIS ONE YOURSELF AND YOU'LL SEE WHAT I MEAN.

ALSO, I HAVE MADE, DESIGNED, AND BUILT A KEYBOARD (REGULAR KEYS) THAT WILL FIT EXACTLY OVER THE ORIGINAL KEYBOARD AND PLUG INTO THE EXISTING RIBBON SOCKET WITH NO MODIFICATION TO VOID YOUR WARRANTY.

THANK YOU,
NICK CARACAL

DEAR TIMELINEZ,

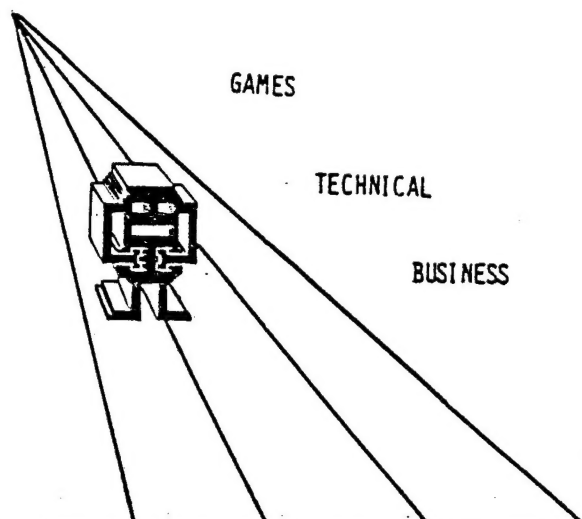
I SUGGEST THAT TIMEX COMPUTER CORP. ALLOW THOSE OF US THAT PURCHASED THE TIMEX 1000 TO TRADE THEM IN FOR THE TIMEX 1500 OR SOME FUTURE MODEL, GIVING US A "NOMINAL" CREDIT OF \$25-35. THIS WOULD STIMULATE SALES AND WOULD BE A GOOD ADVER-

TISING GIMMICK. ALSO, WE COULD STILL USE THE RAM PACK AND MOST OTHER PERIPHERAL EQUIPMENT WHICH WE OWN.

SINCERELY,
CHARLES SIVASLIAN

BANTA SOFTWARE

8088 HIGHWOOD WAY
ORANGEVALE, CA 95662
(916) 722-4895



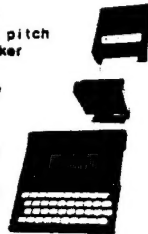
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SEPTEMBER 24, 1983

TO P.U.G. MEMBERS WITH
AN INTEREST IN FORTH

FROM WALT GABY

SUBJECT FORTH INTEREST, TIMEX
SINCLAIR (F.I.T.S.)

AT THE SEPTEMBER 8 MEETING OF
PUG, SEVERAL PEOPLE INDICATED A
SPECIAL INTEREST IN FORTH:

MALCOLM MCAPPEE
KENDRICK C. SMITH
GEORGIE JOE PERRY
TED EBERLY
NORMAN H. LEHFELDT
WALT GABY

THERE ARE CERTAIN TO BE MEMBERS
OF OTHER BAY AREA USER GROUPS
WHO ALSO HAVE SUCH AN INTEREST.

I WOULD LIKE TO SUGGEST THE ES-
TABLISHMENT OF AN INTER-GROUP
PROJECT WHICH MIGHT INVOLVE THE
FOLLOWING:

1. IDENTIFY T/S USERS WHO ARE
INTERESTED IN FORTH
2. MAKE A SURVEY TO DETERMINE
LEVEL OF EXPERIENCE AND IN-
TEREST
3. HOLD A SERIES OF WORKSHOPS
4. REVIEW AND ANALYSE AVAILABLE
FORTH SYSTEMS
5. GIVE DEMONSTRATIONS AT BAY
AREA T/S USER GROUP MEETINGS
6. PROVIDE TUTORIAL HELP FOR
T/S OWNERS WHO WISH TO LEARN
FORTH

SOMEONE SUGGESTED THAT WE HAVE
A LITTLE GET-TOGETHER TOWARDS
THE END OF THE JOINT PUG-EBZUG-
SBZUG MEETING NEXT MONTH.

TO DATE, I HAVE IDENTIFIED FIVE
FORTH (OR FORTH-LIKE) SYSTEMS
ON THE MARKET:

ZX FORTH	IP+S (CANADA)
ZX-FORTH	FORTH DIMENSION
XFORTH	HAUG WILD
TREE-FORTH	SOFT MAGIC
APNZL	GOLDEN STAIR

IT WOULD BE INTERESTING TO DO A
COMPARATIVE ANALYSIS OF THESE

AS YOU MAY KNOW, THERE WILL BE
A FORTH NATIONAL CONVENTION AT
THE HYATT PALO ALTO ON OCTOBER
14 AND 15. IF INTERESTED, CON-
TACT F.I.T. AT (415) 982-8653.

IN CLOSING, I WANT TO REPORT
THAT I SAW A BUMPER STICKER THE
OTHER DAY THAT SAID:

FORTH-PROGRAMMERS
BEGIN DOIT ?TERMINAL UNTIL

I AM A NEWCOMER TO FORTH. IS IT
REALLY TRUE?

SEE YOU AT THE OCTOBER 16 MEET-
ING.

OK

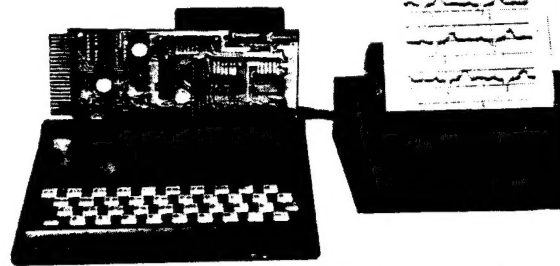
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(415) 752-6294

- CONTINUED FROM PAGE 21 -

TS2068 HAND CLAP

```
20 FOR r=0 TO 15: SOUND r,0: NEXT r
30 FOR t=1 TO 15
40 SOUND 6,24;7,7;8,25;10,16;12
,10;13,16
50 PAUSE 20
60 NEXT t
```

TS2000 MULTICOLORED CIRCLES

```
7 BORDER 1: PAPER 7: CLS
8 FOR c=1 TO 6
9 INK c
10 PLOT 10*(c-1),88: DRAW 128-20*(C-1),0,-PI
15 NEXT c
20 INK 0
```


INTRODUCING: "SCOREPAD"

THIS SUMMER, MY FAMILY WAS PLAYING TABLE GAMES. I DECIDED THAT THE T/3 WOULD BE GOOD FOR KEEPING SCORE FOR SEVERAL PEOPLE

I WROTE A SIMPLE PROGRAM THAT EVOLVED INTO A MORE COMPLEX ONE- WITH ALL THE "BELLS AND WHISTLES"

I FOUND IT VERY USEFUL AND FUN. ALL SCORES ARE COMPUTED AND SHOWN FOR ALL TO SEE.

I WANTED TO SHARE A MORE MOD-EST BUT HANDY VERSION WITH MY TIMELINEZ FRIENDS.

AFTER SHOWING IT AT THE SEPT-EMBER MEETING, WALT GABY SENT ME HIS EDITORIALS SUGGESTIONS.
---THANKS TO WALT.

TRY THIS LISTING, IT WILL RE-CORD SCORES FOR 1 TO 4 PLAYERS. THE NAME OF THE GAME (EG. DICE) AND DATE ARE PRINTED FOR PERMEN-ANT RECORDS (COMPETITION PLAY). PLAYERS ARE PROMPTED BY NAME AND THE HAND BEING PLAYED IS PROMP-TE. MINUS SCORES AND COMPLEX SCORES (EG. 3+50-200*5) WILL WORK.

ALSO THE GAME CAN BE SAVED AND WHEN LOADED AND STARTED WITH A GOTO 300 COMMAND IT WILL CONTIN-UE WHERE YOU LEFT OFF.

IF THE SCOREPAD IS FILLED, USE A GOTO 300 TO CONTINUE PLAY.
Goto 230 For Fresh game same players.

USE "COPY" FOR A PRINTOUT.
USE "RUN" FOR NEW GAME.
IF YOU'D LIKE THE MORE COMPLEX PROGRAM FOR 1 TO 5 PLAYERS ON CASSETTE, YOU CAN GET IT FROM OUR SOFTWARE LIBRARY OR SEND ME \$5.00 AND I'LL SEND YOU A CAS-SETTE.

W.J. SALES
21 COLORADOS DR.
MILLBRAE, CA. 94030
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HAVE FUN
WALTER E. JOHNSON

PHONE: (415) 697-6212 EVENINGS

```
10 PRINT AT 5,10;"SCOREPAD";AT
  3,2;"ENTER GAME NAME AND DATE";
  AT 9,2;"
```

```
20 INPUT F$
30 PRINT AT 10,2;F$
40 PRINT AT 12,2;"ENTER NUMBER
  OF PLAYERS 1 TO 4"
50 INPUT P
60 CLS
70 PRINT AT 5,2;"ENTER "P;" N
  AMES";AT 6,2;"USE UP TO 6 LETTER
  S"
80 LET I$="*"
90 LET J$="*"
100 LET K$="*"
110 LET L$="*"
120 INPUT I$
```

```
130 PRINT I$
140 IF P=1 THEN GOTO 230
150 INPUT J$
160 PRINT J$
170 IF P=2 THEN GOTO 230
180 INPUT K$
190 PRINT K$
200 IF P=3 THEN GOTO 230
210 INPUT L$
220 PRINT L$
230 CLS
240 LET A=0
250 LET B=0
260 LET C=0
270 LET D=0
280 LET H=0
290 CLS
300 PRINT "HAND SCOREPAD ";F$
310 PRINT AT 1,2;I$;AT 1,9;J$;A
  T 1,16;K$;AT 1,23;L$
320 PRINT AT 20,0;"ENTER SCORE
  OR ENT. TO QUIT THEN CO
  PY, GOTO 300, OR RUN"
330 FOR N=1 TO 9
340 PRINT AT N*2,0;CHR$(H+166)
350 PRINT AT 20,15;" ";AT
  20,15;I$
360 INPUT S
370 PRINT AT N*2,2;"+";S;AT N*2
  +1,2;"=";S+A
380 LET A=A+S
390 IF P=1 THEN GOTO 540
400 PRINT AT 20,15;" ";AT
  20,15;J$
410 INPUT T
420 PRINT AT N*2,9;"+";T;AT N*2
  +1,9;"=";T+B
430 LET B=B+T
440 IF P=2 THEN GOTO 540
450 PRINT AT 20,15;" ";AT
  20,15;K$
460 INPUT U
470 PRINT AT N*2,16;"+";U;AT N*
  2+1,16;"=";U+C
480 LET C=C+U
490 IF P=3 THEN GOTO 540
500 PRINT AT 20,15;" ";AT
  20,15;L$
510 INPUT V
520 PRINT AT N*2,23;"+";V;AT N*
  2+1,23;"=";V+D
530 LET D=D+V
540 LET H=H+1
550 NEXT N
560 PRINT AT 20,0;"SCREEN FULL
  NOW COPY, OR GOTO 300 TO CONTINUE
  , OR RUN FOR NEW GAME"
570 STOP
```

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AT THE NEXT MEETING.

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